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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,861	12/12/2003	Michael R. McGovern	86373SLP	1546

7590 05/19/2005

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EXAMINER

SONG, HOON K

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EV

Office Action Summary	Application No.		Applicant(s)	
	10/734,861		MCGOVERN ET AL.	
	Examiner		Art Unit	
	Hoon Song		2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liese, Jr. (US 4912740) in view of Haskell (US 5550383).

Regarding claim 1, Liese teaches an intraoral x-ray film packet, comprising:

an intraoral outer envelope (16);

a film chip (10) disposed within the outer envelope (16); and

a metal shielding sheet (14) disposed within the outer envelope (16).

However Liese fails to teach that the metal sheet is non-lead and substantially Tin.

Haskell teaches an intra oral used of Tin material as a shielding (column 5 line 61 and column 7 line 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to adapt the metal sheet of Liese with Tin material as taught by Haskell, since the Tin material of Haskell would provide the necessary protection to healthy tissue during radiation exposure while avoiding the toxicity of material such as lead (column 3 line 5-8 and column 9 line 55-67).

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Regarding claims 2-3 and 9-10, Liese as modified by Haskell fails to teach the non-lead sheet is comprised of at least or about 99.95 percent tin.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to adapt almost pure Tin material for the sheet since the image generated on the x-ray chip of Liese would be improved using the pure material than impure material which cause irregular beam scattering or interference.

Regarding claims 4 and 11, Liese as modified by Haskell fails to teach the non-lead sheet having a thickness of about 0.002 to about 0.0024 inches.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the thickness of the non-lead sheet with thickness of about 0.002 to about 0.0024 inches, since Tin material has higher atomic number such that thickness can be reduced at certain thickness while providing same functionality of absorbing or protecting the healthy tissue from the incident x-rays beam.

Furthermore, applicant has not stated any criticality associated with the particular thickness of the sheet nor that it solves any long standing problem in the art. Consequently, a finding of the particular thickness of the metal sheet is considered to be a matter of obvious design choice based on routine experiments.

Regarding claim 5, Liese the sheet absorbs between about 60kVp to about 80 kVp of radiation energy (the metal sheet is considered to absorb radiation energy between 60-80 kVp since an x-ray energy used in dental imaging is about that range).

Regarding claim 6, Liese teaches the outer envelop includes a laminated perimetric edge (figure 2).

Regarding claim 7, an intraoral x-ray film packet adapted to capture an intraoral image when exposed to a source of radiation, comprising:

An intraoral outer envelope (16);

A film chip (10) disposed within the intraoral outer envelope (16); and

A metal sheet (14) disposed within the intraoral outer envelope (16) adapted to absorb backscatter radiation when exposed to a source of radiation (the metal sheet is considered to absorb backscatter radiation since the metal sheet such as lead is a heavy metal material that absorbs any x-rays while it is positioned inside of the film packet).

However Liese fails to teach that the metal sheet is non-lead and substantially Tin.

Haskell teaches an intra oral used of Tin material as a shielding (column 5 line 61 and column 7 line 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to adapt the metal sheet of Liese with Tin material as taught by Haskell, since the Tin material of Haskell would provide the necessary protection to healthy tissue during radiation exposure while avoiding the toxicity of material such as lead (column 3 line 5-8 and column 9 line 55-67).

Regarding claim 8, Liese teaches the sheet (14) is disposed on one side of the film chip (10) such that, when the film chip (10) is exposed to a source of radiation to capture the intraoral image, the film chip (10) is intermediate the source of radiation and sheet (14) (figure 2).

Response to Arguments

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "the use of Tin for a sheet used to absorb backscattered radiation") are not recited in the rejected claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that the reference fails to teach "the use of Tin for a sheet used to absorb backscattered radiation" for claim 7, Although neither Liese Jr (US 4912740) or Haskell (US 5550383) expressly teaches "the use of Tin material for a sheet used to absorb backscattered radiation", one having ordinary skill in the art would consider the sheet as a backscatter radiation absorbing sheet since it is located inside of a patient's mouth in use.

In response to applicant's argument that Haskell fails to teach a sheet comprising substantially of Tin, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, the use of Tin shield is not bodily incorporated such as in form of the mold into the film pocket of the Liese's reference rather the benefit of using Tin material would be obvious to one of ordinary skill in the art at the

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time of the invention to protect healthy tissues during radiation exposure while avoiding the toxicity of material such as lead (column 3 line 5-8 and column 9 line 55-67).

Conclusion

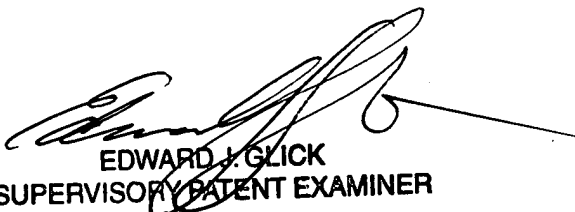
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is (571) 272-2494. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272 - 2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER